

MONTHLY WEATHER REVIEW.

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INTRODUCTION.

The REVIEW for May, 1894, is based on reports from 3,442 stations occupied by regular and voluntary observers. These reports are classified as follows: 153 reports from Weather Bureau stations; 41 reports from U. S. Army post surgeons; 2,324 monthly reports from State weather service and voluntary observers; 31 reports from Canadian stations; 222 reports through the Southern Pacific Railway Company; 588 marine reports through the co-operation of the Hydrographic Office, Navy Department, and "New York Herald Weather Service;" monthly reports from 35 U. S.

Life-Saving stations; 48 reports from navigators on the Great Lakes; monthly reports from local services established in all States and Territories; and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

The WEATHER REVIEW for this month has been prepared under the general editorial supervision of Prof. Cleveland Abbe. The statistical tables are furnished by the Division of Records and Meteorological Data, in charge of Mr. A. J. Henry, acting chief of that division.

CHARACTERISTICS OF THE WEATHER FOR MAY, 1894.

The most prominent meteorological features of the month of May were the infrequency of areas of low pressure; the general high temperature in the Missouri Valley and northern slope and the low temperature on the Pacific coast; the special cold periods of the 19th, 20th, and 21st from the Missouri Valley to the Atlantic coast, and that of the 16th in Cali-

fornia and Oregon; the large excess of rainfall in the middle Atlantic States and upper Lake region, and on the southern slope of the Rocky Mountains, viz, in eastern Colorado and central Texas; the large deficit of rainfall in the Missouri Valley, the east Gulf and west Gulf regions; the snowfall in Kentucky and Tennessee; the river floods in New York, Pennsylvania, and Washington.

ATMOSPHERIC PRESSURE.

[In inches and hundredths.]

The distribution of mean atmospheric pressure reduced to sea level, and as shown by mercurial barometers not reduced to standard gravity and as determined from observations taken daily at 8 a. m. and 8 p. m. (seventy-fifth meridian time), during May, 1894, is shown by isobars on Chart II. That portion of the reduction to standard gravity that depends on latitude is shown by the numbers printed on the right-hand border. This Chart also gives the so-called resultant wind directions for this month, based on the data given in Table IX of this REVIEW.

During the current month of May the pressures at sea level have been highest, 30.04, in the extreme western portion of the State of Washington and very nearly the same, 30.03, on the eastern coast of Florida, which two regions represent the borders of the areas of high pressure over the Pacific and Atlantic oceans, respectively. The regions of lowest pressure were in southern Arizona and California, the lowest being 29.78 at Yuma; the next lowest pressures were from 29.85 to 29.83 in eastern Montana and Alberta and western Saskatchewan and Assiniboia.

The normal distribution of atmospheric pressure and normal resultant wind direction for the month of May were approximately shown on Chart VI of the REVIEW for May, 1893, as computed by Prof. H. A. Hazen, and are not

now reproduced. As compared with the normal for May, the mean pressure for the current month was in excess by 0.06 or less in Maine, the Maritime Provinces, and the Gulf of St. Lawrence, as also throughout a region extending from Texas to Washington, and eastward to Iowa and Manitoba. The principal deficits were in Oregon, California, and Arizona, as also throughout the Lake region, the middle and south Atlantic States. The largest deficit was 0.08 at Washington, Baltimore, and Roseburg, and the largest excess was 0.06, at Omaha, Port Arthur, and Anticosti Island.

As compared with the preceding month of April the mean pressure for May was slightly higher on the coast of Nova Scotia, in Oklahoma, Kansas, and the northern part of Alberta, but lower in all other districts. The greatest fall was about 0.15 in northern California, Nevada and Utah, and southern Oregon and Idaho.

The systematic periodic diurnal variations of pressure are shown by the hourly means given in Table VI.

AREAS OF HIGH AND LOW PRESSURE.

The following sections give some details as to the phenomena attending the individual areas of high and low pressure. The storm warnings officially issued either by the Weather Bureau through the general forecast official at Wash-